

In the Claims

For the convenience of the Examiner, all pending claims are set forth below, whether or not an amendment is made. Please amend the claims as follows:

1. (Currently Amended) An apparatus, comprising:
a loadbalancer operable ~~[[to]]~~ to:
receive a packet included within a request that is associated with an end ~~user~~,
~~the loadbalancer being operable to user~~;
communicate the packet to a selected one of a plurality of ~~gateways~~, ~~the~~
~~loadbalancer being operable to gateways~~;
build an object that correlates an internet protocol (IP) address ~~associated with~~
of the end user to the selected ~~gateway such that gateway~~, the object ~~may be~~ used to direct
subsequently received packets ~~associated with~~ for the end user to the selected ~~gateway~~,
gateway;
~~direct~~ the subsequently received packets ~~being directed by the loadbalancer~~
based on the object and end user IP address information included in the subsequently
received packets, ~~whereby the loadbalancer tracks only the IP address at a layer three level~~
~~such that the subsequently received packets are loadbalanced only on a binding between the~~
~~IP address and the selected gateway. packets~~;
track a user data flow according to the IP address of the object; and
load balance the user data flow based on the tracking according to the IP
address.
2. (Original) The apparatus of Claim 1, wherein an additional loadbalancer may
receive the packet and build an additional object that correlates the IP address associated with
the end user to the selected gateway such that the additional object may be used to direct
subsequently received additional packets associated with the end user to the selected
gateway, the subsequently received additional packets being directed by the additional
loadbalancer based on destination information included in the subsequently received
additional packets.

3. (Original) The apparatus of Claim 2, wherein the loadbalancers evaluate communication flows in one direction in order to direct the flows to the selected gateway based on a selected one of source and destination information.

4. (Original) The apparatus of Claim 1, wherein the gateway is a selected one of a group of elements consisting of:

- a firewall;
- a switch;
- an intrusion detection element;
- gateway general packet radio service (GPRS) support node (GGSN);
- a client service packet gateway (CSPG);
- a packet data serving node (PDSN); and
- a Layer-two tunneling protocol network server (LNS).

5. (Original) The apparatus of Claim 1, wherein the loadbalancer includes a table operable to store the object that correlates the IP address of the end user to the selected gateway.

6. (Original) The apparatus of Claim 1, wherein the gateway performs per-host operations based on an identity associated with the end user.

7. (Original) The apparatus of Claim 1, wherein the loadbalancer includes one or more algorithms that may be used in order to determine which of the plurality of gateways is to receive the packet.

8. (Currently Amended) A method for tracking information in a loadbalancing environment, comprising:

receiving a packet included within a request that is associated with an end user;

communicating the packet to a selected one of a plurality of gateways;

building an object that correlates an internet protocol (IP) address ~~associated with~~ of the end user to the selected ~~gateway such that gateway~~, the object ~~may be~~ used to direct subsequently received packets ~~associated with~~ for the end user to the selected gateway; and

directing the subsequently received packets based on the object and source information included in the subsequently received packets, ~~whereby only the IP address is tracked at a layer three level such that the subsequently received packets are loadbalanced only on a binding between the IP address and the selected gateway.~~ packets;

tracking a user data flow according to the IP address of the object; and

load balancing the user data flow based on the tracking according to the IP address.

9. (Original) The method of Claim 8, further comprising:

building an additional object that correlates the IP address associated with the end user to the selected gateway such that the additional object may be used to direct subsequently received additional packets associated with the end user to the selected gateway; and

directing the subsequently received additional packets based on destination information included in the subsequently received additional packets.

10. (Original) The method of Claim 9, further comprising:

evaluating communication flows in one direction in order to direct the flows to the selected gateway based on a selected one of the source and destination information.

11. (Original) The method of Claim 8, further comprising:

storing the object that correlates the IP address of the end user to the selected gateway in a table.

12. (Original) The method of Claim 8, further comprising:
executing one or more algorithms in order to determine which of the plurality of
gateways is to receive the packet.

13. (Currently Amended) A system for tracking information in a loadbalancing environment, comprising:

means for receiving a packet included within a request that is associated with an end user;

means for communicating the packet to a selected one of a plurality of gateways;

means for building an object that correlates an internet protocol (IP) address ~~associated with~~ of the end user to the selected ~~gateway such that gateway~~, the object may be used to direct subsequently received packets ~~associated with~~ for the end user to the selected gateway; ~~and~~

means for directing the subsequently received packets based the object and on source information included in the subsequently received packets, ~~whereby only the IP address is tracked at a layer three level such that the subsequently received packets are loadbalanced only on a binding between the IP address and the selected gateway.~~ packets;

means for tracking a user data flow according to the IP address of the object; and

means for load balancing the user data flow based on the tracking according to the IP address.

14. (Original) The system of Claim 13, further comprising:

means for building an additional object that correlates the IP address associated with the end user to the selected gateway such that the additional object may be used to direct subsequently received additional packets associated with the end user to the selected gateway; and

means for directing the subsequently received additional packets based on destination information included in the subsequently received additional packets.

15. (Original) The system of Claim 14, further comprising:

means for evaluating communication flows in one direction in order to direct the flows to the selected gateway based on a selected one of the source and destination information.

16. (Original) The system of Claim 13, further comprising:
means for storing the object that correlates the IP address of the end user to the selected gateway.

17. (Original) The system of Claim 13, further comprising:
means for executing one or more algorithms in order to determine which of the plurality of gateways is to receive the packet.

18. (Currently Amended) ~~Software~~ One or more computer-readable storage media encoding software for tracking information in a loadbalancing environment, the software ~~including computer code~~ executed by a processor, the software:

receiving a packet included within a request that is associated with an end user;

communicating the packet to a selected one of a plurality of gateways;

building an object that correlates an internet protocol (IP) address ~~associated with of~~ the end user to the selected ~~gateway such that~~ gateway, the object ~~may be~~ used to direct subsequently received packets ~~associated with for~~ the end user to the selected gateway; and

directing the subsequently received packets based on the object and source information included in the subsequently received packets, ~~whereby only the IP address is tracked at a layer three level such that the subsequently received packets are loadbalanced only on a binding between the IP address and the selected gateway.~~ packets;

tracking a user data flow according to the IP address of the object; and

load balancing the user data flow based on the tracking according to the IP address.

19. (Currently Amended) The ~~software~~ computer-readable storage media of Claim 18, wherein the code is further operable to:

building an additional object that correlates the IP address associated with the end user to the selected gateway such that the additional object may be used to direct subsequently received additional packets associated with the end user to the selected gateway; and

directing the subsequently received additional packets based on destination information included in the subsequently received additional packets.

20. (Currently Amended) The ~~software~~ computer-readable storage media of Claim 19, wherein the code is further operable to:

evaluating communication flows in one direction in order to direct the flows to the selected gateway based on a selected one of the source and destination information.

21. (Currently Amended) The ~~software~~ computer-readable storage media of Claim 18, wherein the code is further operable to:

storing the object that correlates the IP address of the end user to the selected gateway.

22. (Currently Amended) The ~~software~~ computer-readable storage media of Claim 18, wherein the code is further operable to:

executing one or more algorithms in order to determine which of the plurality of gateways is to receive the packet.